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HYSTERICAL MYDRIASIS, PARALYSIS OF THE ACCOMMODATION
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HYDROBROMATE OF HOMATROPINE.

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A CASE OF HYSTERICAL MYDRIASIS, PARALYSIS OF THE ACCOMMODATION AND BLINDNESS, FOLLOWING THE USE OF THE HYDROBROMATE OF HOMATROPINE.¹

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IN the examination of refractive errors, the hydrobromate of homatropine is now generally preferred to the sulphate of atropine or other mydriatics on account of its more transient effects. The duration of its action is somewhat variable. I think, however, that most oculists feel safe in assuring patients that the pupils will contract, and the ability to use the eyes for near work return in from one to three days after the last instillation. The ocular symptoms following the use of homatropine in the case which I have to report, I regard as entirely of hysterical nature, the mydriatic acting simply as the exciting cause.

The patient is a young lady twenty years of age. The previous history, dating from the commencement of menstruation, is of considerable interest in relation to the ocular trouble, and is briefly as follows: The first menstruation took place during the eleventh year, and was characterized by excessive and long continued flowing. She became very much reduced in strength, lost flesh rapidly, and for about three weeks suffered from an active form of delirium. For the next eighteen months or two years, the menstrual flow is said to

¹ Read before the Boston Society for Medical Improvement, December 23, 1889.

have been almost continuous, one menstruation hardly ending before another began. She was confined to the bed a good share of the time, and was subject to periods of delirium, hallucinations and other functional disturbances. A vaginal examination was made with negative results. At the end of her thirteenth year she had reached her present height of five feet and eleven inches. During her sixteenth year there was a decided decrease in the quantity and duration of the menstrual flow, and her general condition became very much improved. At about this time, the patient turned one of her ankles. For a number of months after, the joint was liable to periods of sudden swelling and tenderness, the causes, as a rule, being slight and often not very apparent. This condition was thought by the attending surgeon to be partially if not entirely hysterical.

Asthenopic symptoms were first complained of during the eighteenth year. An oculist was consulted, who prescribed glasses for near work of $+50$ cyl. axis vertical. A mydriatic was used in making the examination, which was probably homatropine, as the pupils are said to have contracted to their normal size within two or three days.

On the following year she came to Boston, entering one of our scientific schools as a student in biology. The only serious hysterical trouble during this year resulted from an injury to the elbow, the forearm became flexed so that it could not be extended by the patient, and remained in this position for a number of weeks. She was referred to Dr. Putnam, by the surgeon who was first consulted, and the trouble is said to have disappeared very rapidly.

The patient first consulted me in regard to her eyes September 23, 1888. The troubles complained of were pains in and about the eyes after reading and

other near work, and occasional slight divergence of the left eye. The asthenopic symptoms were of about two years' duration, but had increased in severity within the last two months. The divergence had been noticed for about three months. Upon examination, a small amount of astigmatism was found in both eyes, and a marked insufficiency of the left rectus internus, the left eye diverging when an attempt was made to fix on an object at a distance of twenty centimetres. The pupils were small and of good reaction, the transparent media and fundus of both eyes perfectly normal. A three per cent. solution of homatropine was prescribed, and the patient was asked to return in three days.

At the second visit, September 24th, the pupils were found to be widely dilated, but the accommodation was not completely paralyzed. The astigmatism was corrected in the right eye by a $+$.50 cyl. axis 105° , and in the left eye by a $+$.50 cyl. axis 80° . Vision with the correcting glasses normal. When the vertical diplopia test was made at a distance of eighteen feet, a prism of eight degrees, base in, was required to place the two images in the same vertical plane. The adducting power for distance was eight degrees; the abducting power, fifteen degrees; and a prism of three degrees was overcome, with its base up or down, before either eye. The patient was instructed to discontinue the use of the homatropine and to return for farther examination September 28th. At this date the pupils were widely dilated, and the accommodation completely paralyzed. The vision with the correcting glasses was normal. Thinking it probable that the apothecary had given atropine in place of the homatropine, I prescribed a one per cent. solution of pilocarpine and asked her to return in one week.

An examination of the eyes, October 5th, gave the

following results: Pupils still widely dilated, accommodation completely paralyzed, vision with correcting glasses less than five-tenths. Both fields of vision symmetrically contracted to about one-half their normal size; fundus both eyes normal. It now seemed to me probable that the trouble was hysterical, and I informed the patient's family to that effect. A consultation with Dr. Williams was desired, and was held on the following day. Dr. Williams advised the continuation of the pilocarpine and the use of antipyrine internally.

October 10th, the condition of the eyes was found to be unchanged, and I decided to try electricity. A mild faradic current was used, the electrodes being applied to the temples or closed lids for about five minutes daily for the next ten days.

October 12th, the condition was found to be decidedly worse; the vision in both eyes had fallen off to less than two-tenths, and the fields of vision had contracted to about one-fourth their normal size. A one-half per cent. solution of eserine was prescribed, but was soon discontinued as it caused considerable pain, and pilocarpine was again used. For the next four days the ocular condition remained unchanged. She had been menstruating for the last two weeks, and had been under the care of Dr. Porter. The menstrual flow ceased on the 17th, and after a sound sleep of fifteen hours, she reported that she was very much better. The condition of the pupils and accommodation was found to be unchanged, but the vision had increased to nearly five-tenths and the fields of vision to about one-half their normal size.

October 24th, there was a return of the menstrual flow, and on the following day, the vision was found to have again decreased, and the fields of vision to have considerably contracted.

Dr. Derby saw the patient in consultation October

26th. He advised the suspension of all local treatment, and suggested that a vaginal examination be made, in order to determine, if possible, a cause for the almost constant flowing. All local treatment was now stopped, and a vaginal examination was made as soon as the patient's condition would admit.

October 31st, severe pains and throbbings of the eyes and bright flashes of colored lights were complained of, which were said to have been almost constant for the last three days. The sight had also grown rapidly worse, so that in moving about the room she ran into objects, and apparently saw very little. She was unable to count fingers, but could distinguish movements of the hand without much difficulty. There was a marked divergence of the left eye which seemed to be constant. On placing the finger tips over the closed lids, a peculiar vibration of the eye-balls could be detected, which was probably the throbbing that the patient complained of. These vibrations were regular, very rapid, and may perhaps have been due to a clonic spasm of one or more of the ocular muscles. They seemed to be entirely independent of movements of the eyes or lids. The pupils were dilated to about one-half their normal size and reacted sluggishly to light. Ophthalmoscopic examination negative, there being no swelling or change in color of the discs, no decrease in size of the retinal arteries or congestion of veins, and no oedema of the retina. She slept little, could retain nothing on the stomach and was losing flesh and strength rapidly.

November 2d, she was transferred to the Massachusetts General Hospital, and through the kindness of Dr. Porter, continued under my care. There had been little improvement in the ocular or general condition, and Dr. Putnam was asked to see the case on the afternoon of the same day. He suggested in the

way of treatment electricity, massage and perfect quiet. During the patient's stay at the hospital, she was kept in bed, and with the exception of her mother, all relatives and friends were excluded. A mild faradic current was given twice daily, the electrodes being applied to the back of the neck and feet, and a one-hour massage once a day.

November 3d, the pupils were nearly normal in size and of good reaction. The left eye still diverged; there was no improvement in vision; and the pains and throbbings of the eyes continued. The stomach was still weak, and all food was given per rectum. She slept very little, and was said by the nurse to have slept less than one hour within the last twenty-four.

November 5th, there was little change in the ocular trouble, but a decided improvement in the general condition. She slept a number of hours during the previous night, and complained little of nausea.

November 7th, the pains in the eyes had entirely ceased, and there was some improvement in vision.

November 8th, distant vision was found to have improved very considerably. She could distinguish large objects about the room, — chairs, pictures, etc.; but near vision was still very defective. Her general condition was also much better, and she was discharged from the hospital.

Upon examination of the eyes at my office four days later, the vision was found to be normal for distance, but was so defective for near, that she was unable to read common newspaper print even with a plus glass of two or three dioptries. The pupils were normal in size, and reacted well both to light and accommodation. A vaginal examination was made by Dr. Elliott November 15th. A retroversion of a very considerable degree was found to exist, and the large size of the

uterus also suggested the possible presence of some new growth. The examination was made under ether, and no nausea or other disagreeable symptoms were suffered in consequence.

The patient has been under the care of Dr. Elliott for the last year, and her condition has greatly improved. Her menstruations are more regular. She has gained in flesh and strength and suffers little discomfort in using the eyes. The inability to read fine print, was the most persistent of the hysterical symptoms, but this trouble has not been complained of for some time.

This case is certainly unique, and I think none of a similar nature has been previously reported.

The question of malingering in hysteria is one that must, of course, always be taken into consideration. Although the symptoms may have been somewhat exaggerated by my patient, I feel confident that there was no wilful deception on her part; and the previous history of the case certainly strengthens this conclusion.

The apparent relations existing between the menstrual flow and the ocular disturbances, the improvement in vision following a cessation of menstruation, and the decrease in vision with the return of the menstrual flow, is certainly one of interest. Although it cannot be assumed that the uterine trouble was the primary cause of the hysteria, the general physical and mental depression resulting from the prolonged flowing, must naturally have increased the liability to hysterical manifestations.

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